

Appl. No. 10/083,990
Amdt. dated 06/07/2004
Reply to Office action of 05/21/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-15. Canceled

16.(original) A process for wet etching a wafer having front and back surfaces, comprising:

at a first pressure, contacting said back surface with a first liquid that etches said wafer;

at a second pressure that is equal to said first pressure, contacting said front surface with a second liquid that does not etch said wafer, whereby leakage of said first liquid to said front surface does not occur; and

etching said wafer for a period of time without any part of said front surface getting etched.

17 .(original) The process described in claim 16 wherein said wafer is a semiconductor.

18.(original) The process described in claim 16 wherein said wafer has a diameter between about 10 and 20 cm.

19.(original) The process described in claim 16 wherein said wafer has thickness between about 0.5 and 0.725 mm.

20.(original) The process described in claim 16 wherein said first pressure can be balanced by said second pressure.

21.(original) A process for wet etching a silicon wafer having front and back surfaces, comprising:

- providing first and second chambers that are separated from each other by said silicon wafer whereby said back surface is part of said first chamber and said front surface is part of said second chamber;

- providing seals that prevent liquid from flowing between said chambers;

- causing a solution of potassium hydroxide, at a first temperature and pressure, to flow into and out of said first chamber, in a direction parallel to said back surface through a rotating shower head, whereby turbulence is induced in said potassium hydroxide solution thereby removing from said back surface any bubbles that may form there;

- causing deionized water, at a second temperature and pressure, to flow into and out of said second chamber in a direction parallel to said front surface through a rotating shower head, whereby turbulence is induced in said deionized water thereby removing any bubbles that may form on said front surface;

- monitoring deionized water in said second chamber for the presence of potassium hydroxide; and

- etching said back surface for a period of time that is insufficient for said potassium hydroxide solution to etch all the way through any part of said silicon wafer.

22.(original) The process described in claim 21 wherein said solution of potassium hydroxide has a concentration between about 30% and 40% by weight.

23.(original) The process described in claim 21 wherein said first temperature is

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between about 60 and 90 °C.

24.(original) The process described in claim 21 wherein said second temperature is between about 60 and 90 °C.

25.(original) The process described in claim 21 wherein the step of monitoring deionized water in said second chamber for the presence of potassium hydroxide further comprises measuring the pH.

26.(original) The process described in claim 25 further comprising terminating etching when said pH exceeds 7.